

## **REMARKS/ARGUMENTS**

Favorable reexamination of the captioned application is respectfully requested.

### **A. SUMMARY OF THIS AMENDMENT**

By the current amendment, Applicants basically:

1. Amend the Abstract to moot the objection raised in the first enumerated paragraph of the office action.
2. Editorially amend one paragraph of the specification.
3. Call the Examiner's attention to the Preliminary Amendment filed simultaneously with the application on February 13, 2002 (see Section B *infra*).
4. Editorially amend all claims (e.g., to provide an article in the claim preambles, and to clarify the elements and steps of respective independent claims 1 and 10).
5. Add new independent claim 20 (which is analogous to independent claim 1 but without means plus function phraseology), and claims 21 - 26 dependent thereon (respectively resembling claims 2, 5, and 6 - 9).
6. Respectfully traverse all prior art rejections (see section C *infra*).

### **B. THE PRELIMINARY AMENDMENT**

The Preliminary Amendment filed February 13, 2002, has obviously thus far been overlooked in the examination of the application and the preparation of the September 4, 2003 office action.

The Preliminary Amendment filed February 13, 2002 moots the first two objections raised in the "Claim Objections" portion of the office action. If the Patent Office's file for this application does not contain the Preliminary Amendment filed

February 13, 2002, Applicants will gladly supply another copy and proof of filing upon request. In the meantime it is noted that the set of claims included with this Amendment reflect the claim amendments effected by the Preliminary Amendment filed February 13, 2002. In essence, the claim amendments effected by the Preliminary Amendment filed February 13, 2002 involved elimination of multiple claim dependencies as well as elimination of most reference numerals from the claims. As noted above, the present amendment deletes inadvertently remaining reference numerals from claims 11 and 15.

### **C. PATENTABILITY OF THE CLAIMS**

Claims 1 – 18 stand rejected under 35 USC §103(a) as allegedly being unpatentable over U.S. Patent 6,211,734 to Ahn in view of U.S. Patent 5,986,500 to Park. All prior art rejections are respectfully traversed for at least the following reasons.

U.S. Patent 6,211,734 to Ahn describes an RF circuit that compensates for an amplifier's distortion (see col. 1, lines 8-10). The Ahn circuit comprises an active distortion generator, shown in Fig. 4, where the signal is divided into two parts by means of a first divider (41), which signal parts are led through two branches; a linear branch (42) and a non-linear branch (43). An adjustable damper and phase-shifter (47) is placed at the input of the non-linear branch (43). The two branches each comprise a damper (42a, 43b) and also a linear (42b) and a non-linear amplifier (43a), respectively. The signals are combined in a branch-line coupler (44) in order to acquire the phase error between the branches (42, 43). The outputs from the branch-line coupler (44) is then combined in a combiner (45) in order to acquire the amplitude error between the branches (42, 43) (see col. 5, lines 1-13).

U.S. Patent 5,986,500 to Park describes an amplifier stage comprising a number of branches, as shown in Fig. 2, where each branch in turn comprises an amplifier with a serial switch. The Park input signal is divided for being input to each one of the branches and its respective amplifier, and is then combined in order to acquire a single amplified

signal. It is possible to shut off a particular amplifier by using the switch that is connected in series with the current amplifier (see col. 5, lines 36-46). Fig. 5 shows a power detector (415), which is described more in detail with reference to Fig. 6. The power detector (415) comprises a divider (451) with two outputs. One signal is phase-shifted 180° in the divider (451), and the two signals are fed through respective schottky diodes (454, 455) for detection of the current RF effect (see col. 12, line 3-27).

Thus, considering the two applied references, Ahn discloses a circuit which is used for another purpose than the present invention, but which comprises a divider and a combiner, where a controllable phase-shifter is used to control the output signal. The circuit does not comprise power detectors.

The secondary reference (Park) discloses a power detector with two schottky diodes that are fed with signals that have a relative phase difference of 180°. Park's schottky diodes do not seem to be adapted for different dynamic sub-ranges within the total dynamic range where power detection shall take place.

Importantly, unlike either applied references or the applied references in postulated combination, the independent claims all require a first and a second power detector/detecting which are calibrated for different dynamic sub-ranges within the total dynamic range where power detection shall take place. Neither applied reference addresses the problem of acquiring high dynamic RF power detection, nor Applicant's claimed solution.

It rather appears that the Examiner has picked and chosen features from each one of the applied references and loosely attempted to tie them together in order to achieve the present invention without a proper motivation. And there certainly is no motivation to combine. In fact, Park instead teaches away from the solution to the problem according to the present invention, as Park's schottky diodes are not adapted for different

dynamic sub-ranges within the total dynamic range where power detection shall take place. It is therefore not obvious for the one with an ordinary skill in the art to use the applied references to arrive at Applicants' claims.

#### **D. MISCELLANEOUS**


In view of the foregoing and other considerations, a formal indication of allowance is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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## ABSTRACT

The invention relates to a device (100, 200) for use in the detection of the power that passes through an electronic device, comprising means (110) for division of the power that enters the device into a first and a second branch. Each branch receives a predetermined proportion of the total input power with a predetermined phase difference between the signals that go into the branches, and the device comprises a first power detector (140) for the first branch and a means (130) for summation of the power in the two branches. The invention is characterized in that the device (100, 200) further comprises a second power detector (150) for the second branch, and in that the means (130) for summation can be controlled with regard to which branch and thereby to which power detector (140, 150) the sum of the power is diverted, and in that the device comprises, in one of its branches, means (120) for said control of the summator.